



# Attainment Demonstration for the 1-Hour Ozone NAAQS

AM-27-00

September 2000  
NRB Meeting



# Attainment Demonstration for the 1-Hour Ozone NAAQS

## ◆ Outline of Green Sheet Package

- ◆ Introduction
- ◆ Overview of Ozone Attainment Plan
- ◆ Summary of Major Changes to Draft Rules
- ◆ Rate of Progress
- ◆ NO<sub>x</sub> Based Control Program
- ◆ VOC Controls (RACT)
- ◆ Excess Emission Fee
- ◆ Background on Ozone SIPs



# Attainment Demonstration for the 1-Hour Ozone NAAQS

## ◆ Introduction

- > Rules in package designed to meet Federal ROP mandate
- > Plan will assure attainment of the 1- hour standard by 2007
- > Based upon upwind emission reductions from other states and ROP NO<sub>x</sub> and VOC reductions in 8 SE Wisconsin Counties
- > Modeling supports finding of projected attainment in 2007
- > Plan includes other federally mandated requirements (RACT, excess emission fees)
- > Claims credit for selective NO<sub>x</sub> reduction measures for attainment and ROP while maintaining most of the NO<sub>x</sub> waiver (182f).



# Attainment Demonstration for the 1-Hour Ozone NAAQS

- ◆ Overview of the Ozone Attainment Plan
  - ◆ Show air quality sufficient to attain the 1-hour standard by 2007
  - ◆ Achieve ROP emission reductions for milestone years of 2002, 2005, 2007
  - ◆ Sets emission rates and ROP contingency measures for 5 specific electric generation facilities
  - ◆ Establishes RACT for VOC emissions from industrial cleaning operations
  - ◆ Requires fee of \$5000/ton of VOC for major sources in SE WI if area remains nonattainment in 2008



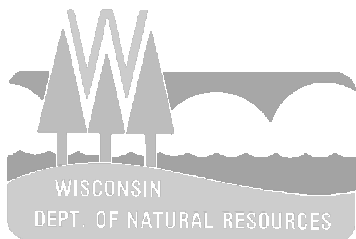
# Attainment Demonstration for the 1-Hour Ozone NAAQS

- ◆ Summary of Major Changes to Draft Rules
  - ◆ Deleted emission controls outside of 8 county area in SE Wisconsin
  - ◆ Entirely deleted offset requirements
  - ◆ Removed annual burner tune-up component
  - ◆ Raised new source NO<sub>x</sub> standard threshold to be consistent with major modification thresholds
  - ◆ Adjusted emission limits and thresholds for specific NO<sub>x</sub> performance standard categories
  - ◆ Revised VOC RACT rule to improve ease of implementation



# Attainment Demonstration for the 1-Hour Ozone NAAQS

- ◆ Summary of Major Changes to Draft Rules (cont'd)
  - ◆ Set applicability period to ozone season for existing facility NO<sub>x</sub> emission limits
  - ◆ Adjustments to requirements for existing electric generating facilities
  - ◆ Delayed effect of 3% ROP control contingency
  - ◆ Removed Kewaunee County from ROP control requirements
  - ◆ Established a non-regulatory effort to pursue voluntary NO<sub>x</sub> reductions



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**Table 2 - Rate-of-Progress Milestones for 2002 through 2007**

	2002 ("33%")		2005 ("42%")		2007 ("51%")	
	VOC 330 tpd	NOx 356 tpd	VOC 329 tpd	NOx 354 tpd	VOC 328 tpd	NOx 353 tpc
% Reduction Relative to "1990 Adjusted Baseline"						
8-County Budget	230 tpd	346 tpd	221 tpd	321 tpd	214 tpd	295 tpc
Creditable Reduction	30.3%	2.7%	32.8%	9.2%	34.8%	16.2%



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**Table 3 – Mobile Sector ROP Budgets for the 1-Hour Attainment Demonstration**

Counties with Ozone Attainment or Maintenance Conformity Budgets <sup>1</sup>	2002		2005		2007	
	VOC (TPD)	NOx (TPD)	VOC (TPD)	NOx (TPD)	VOC (TPD)	NOx (TPD)
Milwaukee, Racine, Kenosha, Waukesha, Washington, & Ozaukee	43.5	103.5	36.7	84.1	32.2	71.4
Sheboygan	4.5	9.4	3.7	7.4	3.3	6.4
Manitowoc	5.4	10.0	5.2	8.8	5.2	8.3
<b>TOTAL</b>	<b>53.4</b>	<b>122.9</b>	<b>45.6</b>	<b>100.3</b>	<b>40.7</b>	<b>86.1</b>

<sup>1</sup>Assumes high VMT growth, 7.5% buffer, updated speed profiles, and EPA's latest Tier2/low sulfur gasoline projections.

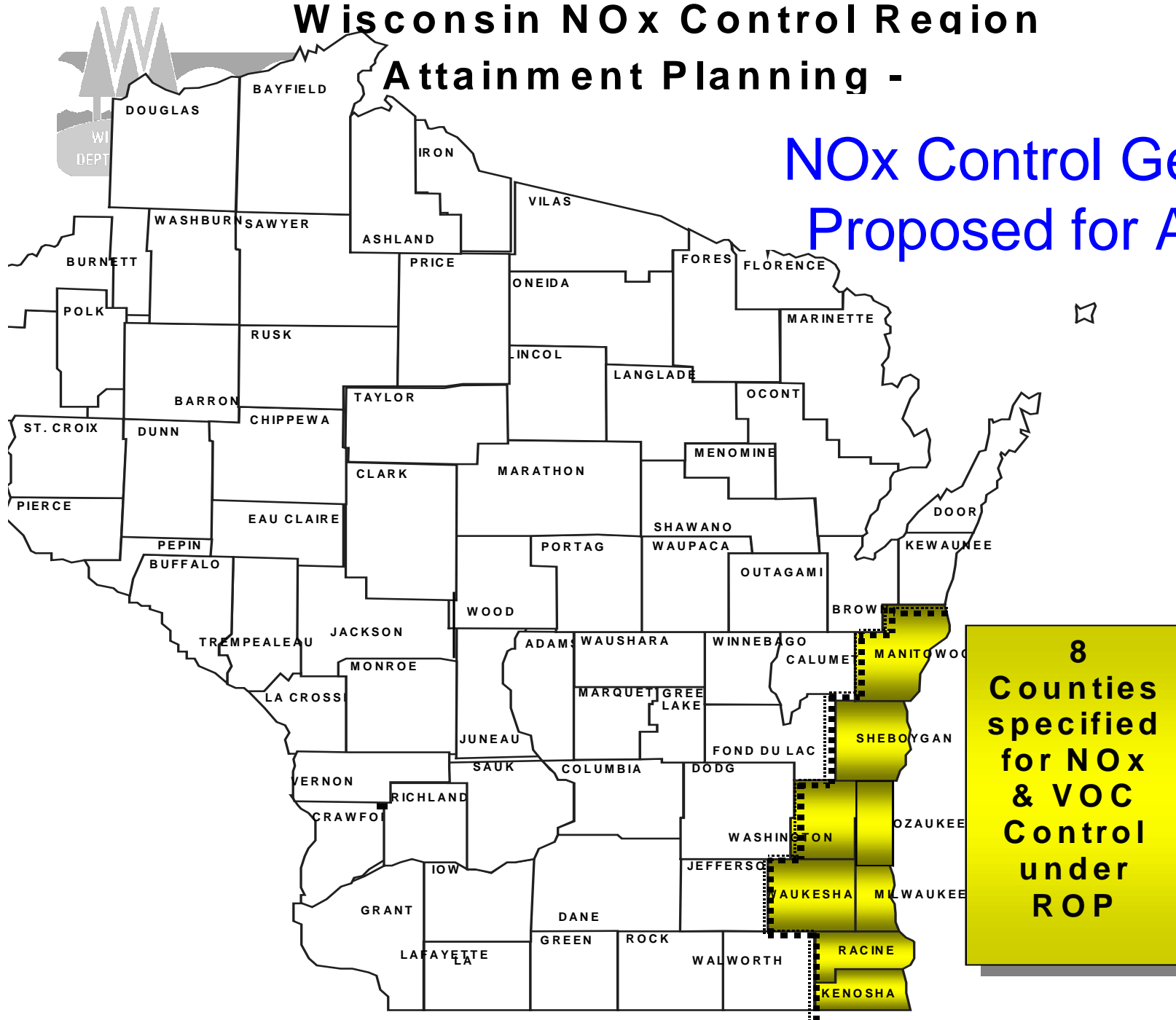


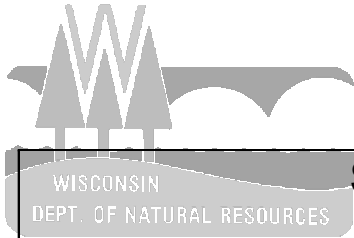
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- ◆ A NO<sub>x</sub>-Based Control Program to Support Attainment
  - ◆ NO<sub>x</sub> waiver
  - ◆ Ozone Transport Assessment Group (OTAG) results
  - ◆ Selective use of NO<sub>x</sub> controls in our plan
  - ◆ Geographic scope
  - ◆ NO<sub>x</sub> controls from Stationary Sources: combustion optimization and emission performance standards for existing sources
  - ◆ NO<sub>x</sub> emission performance standards for new sources
  - ◆ NO<sub>x</sub> cutpoints for I/M

# Wisconsin NOx Control Region Attainment Planning -

## NOx Control Geography Proposed for Adoption

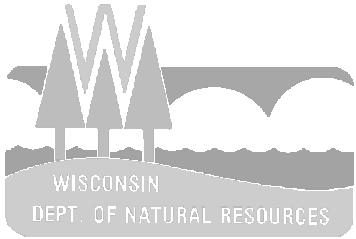




# Final NOx Controls - Summary of SIP

## Stationary Source NOx Emission Controls to Achieve Rate-of-Progress for the 1-Hour Ozone Standard Attainment Demonstration

Ozone Control Regions in SIP	Offsets for Major NOx Sources	Minimum Performance Standards for New Facilities	Minimum Performance Standards for Existing Facilities	Large Electric Generation Facilities (EGUs)
8 SE WI Counties	No Offset Requirement	2001	<p><b>Dec 31, 2002</b></p> <p>Includes Large Unit NOx Emission Limits and Combustion Optimization</p>	<p><b>Dec 31 of Specified Year:</b></p> <p>2002 - 0.33 lbs/mmbtu</p> <p>2003 – 0.31 “</p> <p>2004 – 0.30 “</p> <p>2005 – 0.29 “</p> <p>2006 – 0.29 “</p> <p>2007 – 0.28 “</p> <p><b>EGU System Average Rate</b> (30 day rolling avg)</p> <p>Assumes I/M &amp; Performance Standards in ROP Package</p>
Remainder of State	<p><b>No ROP Requirement -</b>  <b>Voluntary Combustion Optimization, Tune-up and NOx Performance Commitments by Large Sources</b></p>			



## Attainment Demonstration for the 1-Hour Ozone NAAQS

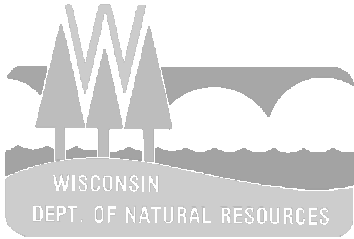
- ◆ VOC Controls (RACT) - Not in previous ozone attainment plants
- ◆ RACT required for 3 categories: Industrial Clean-up Solvents, Ink Manufacturing and Plastic Parts Coating
  - ◆ NR 423 proposed revisions would require RACT for VOC emissions at industrial cleaning operations in a 9 county area including Kewaunee.
  - ◆ Rule includes emission restrictions, operational practices, control systems and record keeping
  - ◆ Will reduce VOC emissions by 0.1 to 0.6 TPD
  - ◆ Administrative Order & Additional Trailer Rule



# Attainment Demonstration for the 1-Hour Ozone NAAQS

## ◆ Excess Emissions Fee

- ◆ Not Popular but Federally Mandated
- ◆ Affects Major VOC sources in Severe Ozone Nonattainment Counties if nonattainment exists in 2008 or beyond
- ◆ Requires payment of \$5,000/ton of VOC on emissions beyond 80% of 2007 baseline
- ◆ Incorporated into the emissions inventory fee structure in revisions proposed to (NR 410.06)



# Attainment Demonstration for the 1-Hour Ozone NAAQS

## ◆ Background - Ozone SIP Revisions

- ◆ December 31, 2000 deadline for SIP revisions to result in attainment of 1-hour ozone standard
- ◆ Third ozone plan - Adds to 15% and 9% plans
- ◆ Ozone designations in the area
  - > Six severe ozone nonattainment counties
  - > Sheboygan is technically in attainment but violating the 1 hour standard and must implement a maintenance plan
  - > Manitowoc is still nonattainment and violating
  - > Kewaunee is classified as attainment and is not violating the standard.



## Attainment Demonstration for the 1-Hour Ozone NAAQS

- ◆ Potential Affected Parties and Stakeholder Input
- ◆ Prior Involvement of the Natural Resources Board
- ◆ Summary of Comments on the Draft Plan
- ◆ Fiscal Impact of the ROP Plan
- ◆ Environmental Review for Potential Impact
- ◆ Small Business Analysis
- ◆ Comparison with Federal Requirements



## Changed NOx Point Source Summary

Equipment Category	Optimization Requirement		NOx Rate Limits	
	Units	Tons	Units	Tons
Electric Generation Units >500			17	36-45
Other Solid Fuel Boilers	6	1.3	1	0
Gas/Oil Boilers	5	0.06	5	1.0
Furnaces	2	0.76	2	1.2
Kilns	1	0.06		
CTs			4	0.3
IC Engines			3	0.4
Other Process Heaters, Dryers, Ovens, Asphalt Plants				